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Terms: [patno=6021303](#) ([Edit Search](#))

309922 (00) 6021303 February 1, 2000

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT
6021303

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February 1, 2000

Image heating device and image forming device using the same
REISSUE: February 1, 2002 - Reissue Application filed Ex. Gp.: 2852; Re. S.N. 10/006,035
(O.G. October 8, 2002)

INVENTOR: Terada, Hiroshi, Ikoma, JP; Toyoda, Akinori, Katano, JP; Urata, Yoshihito, Katano, JP; Yamamoto, Hajime, Ikoma, JP; Genji, Nobuo, Osakasayama, JP; Ishimaru, Naoaki, Minoo, JP; Nakatsugawa, Tatsuo, Utsunomiya, JP; Naito, Masakazu, Shioya-gun, JP

APPL-NO: 309922 (00)

FILED-DATE: May 11, 1999

GRANTED-DATE: February 1, 2000

PRIORITY: May 15, 1998 - 10-132984, Japan (JP); July 17, 1998 - 10-203005, Japan (JP)

ASSIGNEE-AT-ISSUE: Matsushita Electric Industrial Co., Ltd., Osaka, JP

ASSIGNEE-AFTER-ISSUE: August 4, 1999 - ASSIGNMENT OF ASSIGNEES INTEREST (SEE DOCUMENT FOR DETAILS)., MATSUSHITA GRAPHIC COMMUNICATION SYSTEMS, INC. 2-3-8, SHIMOMEGURO, MEGURO-KU TOKYO 153-8687 JAPAN, Reel and Frame Number: 010139/0355

LEGAL-REP: Merchant & Gould, P.C.

PUB-TYPE: February 1, 2000 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

US-MAIN-CL: 399#328

US-ADDL-CL: 399#329, 399#330, 399#335

CL: 399

SEARCH-FLD: 399#320, 399#328, 399#329, 399#330, 399#333, 399#335, 399#338

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Selected file: PLUSPAT

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Last update of file: 2003/04/16 (YYYY/MM/DD) 2003-15/UP (basic update)

Search statement 1

?us6021303/pn

** SS 1: Results 1

Search statement 2

?prt fu legalall max

1/1 PLUSPAT - (C) QUESTEL-ORBIT
PN - US6021303 A 20000201 [US6021303]
TI - (A) Image heating device and image forming device using the same
PA - (A) MATSUSHITA ELECTRIC IND CO LTD (JP)
PA0 - Matsushita Electric Industrial Company, Ltd., Osaka [JP]
IN - (A) TERADA HIROSHI (JP); TOYODA AKINORI (JP); URATA YOSHIHITO (JP);
YAMAMOTO HAJIME (JP); GENJI NOBUO (JP); ISHIMARU NAOAKI (JP);
NAKATSUGAWA TATSUO (JP); NAITO MASAKAZU (JP)
AP - US30992299 19990511 [1999US-0309922]
PR - JP13298498 19980515 [1998JP-0132984]
- JP20300598 19980717 [1998JP-0203005]
IC - (A) G03G-015/20
EC - G03G-015/20H2D
- G03G-015/20H2P3
ICO - S03G-215/20A3
PCL - ORIGINAL (O) : 399328000; CROSS-REFERENCE (X) : 399329000 399330000
399335000
DT - Corresponding document
CT - US4256945; US5568240; US5713069; US5752148; US5765086; US5768673;
US5778293; US5822669; US5862445; US5881349; US5939337; US5940655
STG - (A) United States patent
AB - An image heating device comprises a cylindrical heating roller with a Curie temperature of 210 (degree) C., a magnetization coil for magnetizing the heating roller with an alternating magnetic field, which is arranged inside the heating roller, and a nip portion for heating a recording material that carries a toner image with heat from the heating roller, while the recording material is being conveyed along said nip portion. The ratio between the amount of heat generated in said heat-generating member at Curie temperature or higher to the amount of heat generated at room temperature in said heat-generating member is not more than 1/2. With this configuration, the heating roller can regulate its own temperature to stabilize at a temperature that is suitable for fixing, and the problems of partial overheating or underheating, unstable heat generation, or damage of the device can be eliminated.

1/1 LGST - (C) LEGSTAT
PN - US 6021303 [US6021303]
AP - US 309922/99 19990511 [1999US-0309922]
DT - US-P
ACT - 19990511 US/AE-A

4/17/03

US 6,021,303

10/066035

APPLICATION DATA (PATENT)
{US 309922/99 19990511 [1999US-0309922] }
- 20000201 US/A
PATENT
- 20021008 US/RF
REISSUE APPLICATION FILED
20020201
UP - 2002-42

1/1 CRXX - (C) CLAIMS/RRX
AN - 3276386
PN - 6,021,303 A 20000201 [US6021303]
PA - Matsushita Electric Industrial Co Ltd JP
PT - E (Electrical)
ACT - 20020201 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20021008
REISSUE REQUEST NUMBER: 10/066035
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2852

Reissue Patent Number:

UP - 2002-41
UACT- 2002-10-08

Search statement 2

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Selected file: INPADOC

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For information on content, ..INFO INPD.

Search statement 1

?fam us6021303/pn

1 Patent Groups
** SS 1: Results 6

Search statement 2

?famstate nonstop

1/6 INPADOC - (C) INPADOC
PN - CN 1236121 A 19991124 [CN1236121]
TI - IMAGE HEATER AND IMAGE FORMING DEVICE USING THE SAME
IN - TERADA HIROSHI [JP]; YAMAMOTO HAJIME [JP]; TOYODA AKINORI [JP]
PA - MATSUSHITA ELECTRIC IND CO LTD [JP]
AP - CN 99106645/99-A 19990517 [1999CN-0106645]
PR - JP 132984/98-A 19980515 [1998JP-0132984]
- JP 203005/98-A 19980717 [1998JP-0203005]
IC - G03G-015/20; G03G-015/02

2/6 INPADOC - (C) INPADOC
 PN - EP 957412 A3 20010627 [EP-957412]
 TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE USING THE SAME
 LA - ENG
 IN - TERADA HIROSHI [JP]; TOYODA AKINORI [JP]; URATA YOSHIHITO [JP];
 YAMAMOTO HAJIME [JP]; GENJI NOBUO [JP]; ISHIMARU NAOAKI [JP]
 PA - MATSUSHITA ELECTRIC IND CO LTD [JP]; MATSUSHITA GRAPHIC [JP]
 AP - EP 99108631/99-A 19990511 [1999EP-0108631]
 PR - JP 132984/98-A 19980515 [1998JP-0132984]
 - JP 203005/98-A 19980717 [1998JP-0203005]
 IC - G03G-015/20
 DS - AT* BE* CH* CY* DE* DK* ES* FI* FR* GB* GR* IE* IT* LI* LU* MC* NL*
 PT* SE*

1/1 LEGALI - (C) LEGSTAT
 PN - EP 957412 [EP-957412]
 AP - EP 99108631/99 19990511 [1999EP-0108631]
 DT - EP-P
 ACTE- 19990511 EP/AE-A
 EP-APPLICATION
 {EP 99108631/99 19990511 [1999EP-0108631] }
 - 19991117 EP/AK-A2 [+]
 DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
 DE GB
 - 19991117 EP/AX [+]
 EXTENSION OF THE EUROPEAN PATENT TO
 AL;LT;LV;MK;RO;SI
 - 19991117 EP/A2 [+]
 PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
 - 20010627 EP/AK-A3 [+]
 DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
 AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 - 20010627 EP/AX [+]
 EXTENSION OF THE EUROPEAN PATENT TO
 AL;LT;LV;MK;RO;SI
 - 20010627 EP/A3 [+]
 SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
 - 20010905 EP/17P [+]
 REQUEST FOR EXAMINATION FILED
 20010706
 - 20020320 EP/AKX [+]
 PAYMENT OF DESIGNATION FEES
 DE GB
 UP - 2002-12

3/6 INPADOC - (C) INPADOC
 PN - EP 957412 A2 19991117 [EP-957412]
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 AP - EP 99108631/99-A 19990511 [1999EP-0108631]
 PR - JP 132984/98-A 19980515 [1998JP-0132984]
 - JP 203005/98-A 19980717 [1998JP-0203005]

4/17/03

US 6,021,303

10/066035

IC - G03G-015/20

DS - DE* GB*

1/1 LEGALI - (C) LEGSTAT

PN - EP 957412 [EP-957412]

AP - EP 99108631/99 19990511 [1999EP-0108631]

DT - EP-P

ACTE- 19990511 EP/AE-A

EP-APPLICATION

{EP 99108631/99 19990511 [1999EP-0108631]}

- 19991117 EP/AK-A2 [+]

DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:

DE GB

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- 20010627 EP/AK-A3 [+]

DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

- 20010627 EP/AX [+]

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AL;LT;LV;MK;RO;SI

- 20010627 EP/A3 [+]

SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)

- 20010905 EP/17P [+]

REQUEST FOR EXAMINATION FILED

20010706

- 20020320 EP/AKX [+]

PAYMENT OF DESIGNATION FEES

DE GB

UP - 2002-12

4/6 INPADOC - (C) INPADOC

PN - JP 2000035724 A2 20000202 [JP2000035724]

TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE

IN - TERADA HIROSHI; TOYODA AKINORI; GANJI NOBUO; ISHIMARU NAOAKI; NAKATSUGAWA TATSUO; NAITO MASAKAZU

PA - MATSUSHITA ELECTRIC IND CO LTD; MATSUSHITA GRAPHIC COMMUNIC

AP - JP 203005/98-A 19980717 [1998JP-0203005]

PR - JP 203005/98-A 19980717 [1998JP-0203005]

IC - G03G-015/20; G03G-015/20; H05B-006/14

5/6 INPADOC - (C) INPADOC

PN - JP 11327331 A2 19991126 [JP11327331]

TI - IMAGE HEATING DEVICE AND IMAGE FORMING DEVICE

IN - TERADA HIROSHI; YAMAMOTO HAJIME; URATA YOSHITO; GANJI NOBUO; ISHIMARU NAOAKI

PA - MATSUSHITA ELECTRIC IND CO LTD

AP - JP 132984/98-A 19980515 [1998JP-0132984]

PR - JP 132984/98-A 19980515 [1998JP-0132984]

IC - G03G-015/20

6/6 INPADOC - (C) INPADOC

4/17/03

US 6,021,303

10/066035

PN - US 6021303 A 20000201 [US6021303]
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PR - JP 132984/98-A 19980515 [1998JP-0132984]
- JP 203005/98-A 19980717 [1998JP-0203005]
IC - G03G-015/20

1/1 LEGALI - (C) LEGSTAT

PN - US 6021303 [US6021303]
AP - US 309922/99 19990511 [1999US-0309922]
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APPLICATION DATA (PATENT)
{US 309922/99 19990511 [1999US-0309922]}
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REISSUE APPLICATION FILED
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4/17/03

Darcy Bates
Technical Information Specialist
703-306-5419

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Re: 10/066,035 US 6,021,303

CP4-9B06

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Darcy Bates
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CP4-9C 18**